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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,629	09/21/2005	Lawrence R. Green	75196-321978	4261
<div>25764 7590 12/12/2007</div> <div>FAEGRE & BENSON LLP</div> <div>PATENT DOCKETING</div> <div>2200 WELLS FARGO CENTER</div> <div>90 SOUTH SEVENTH STREET</div> <div>MINNEAPOLIS, MN 55402-3901</div>				
<div>EXAMINER</div> <div>YANG, NELSON C</div>				
<div>ART UNIT PAPER NUMBER</div> <div>1641</div>				
<div>MAIL DATE DELIVERY MODE</div> <div>12/12/2007 PAPER</div>				

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/550,629

Applicant(s)

GREEN, LAWRENCE R.

Examiner

Nelson Yang

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-36 and 38-44 is/are pending in the application.
- 4a) Of the above claim(s) 19-31, 34-36, 38 and 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32, 33 and 39-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/27/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 32, 33, 39-43 in the reply filed on September 20, 2007 is acknowledged.
2. Claims 19-31, and 34-36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on May 11, 2007.
3. Claims 38 and 44 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on September 20, 2007.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 32, 39, 40, 42, and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Tuyl [US 2004/0102742].
6. With respect to claim 32, Tuyl teaches an optical device comprising a CCD camera, lenses for focusing images on the CCD camera, and motorized mechanisms for adjusting the focus (para. 0066). Tuyl further teaches source fluid containment structures such as microtiter

plates (para. 0035) and moveable stage for positioning the source fluid containment structures (para. 0036), and a cooling unit (para. 0188).

7. With respect to claims 39, 42, Tuyl teaches a CCD camera (para. 0066).
8. With respect to claim 40, Tuyl teaches that the well plates may be transparent or translucent (para. 0138).
9. With respect to claim 43, Tuyl teaches that the cooling unit may comprise a Peltier junction (para. 0188).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tuyl [US 2004/0102742] in view of Engelhardt et al. [US 2002/0179828].

With respect to claim 33, Tuyl teaches that the image detection system may provide signal feedback to the machine controls, and may be used for pre-ejection calibration, post ejection verification/measurements of physical and/or chemical parameters within each individual target locations (para. 0019). Tuyl fails to teach creating an average interpolation function for producing interpolated signal values for the pixel.

Engelhardt et al., however, teach that in the assignment of the display signal to the image point position, consideration is advantageously given to the fact that the detection signals and the

actual and nominal signals can have different electronic transit times and processing times, and therefore, phase differences between the signals can be compensated for using an assignment operation containing an interpolation of the detection signals (para. 0028). Furthermore, to eliminate jitter along an image column, the signals are averaged over several periods prior to assignment (para. 0025).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a medium comprising a sequence of instructions that cause the processor to create an average interpolation function for producing interpolated signal values for the pixel in the device of Tuyl, as suggested by Engelhardt et al., such that phase differences between the signals can be compensated for using an assignment operation containing an interpolation of the detection signals, and further to eliminate jitter along a image column.

12. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tuyl [US 2004/0102742] in view of Bloomfield et al. [US 4,501,495]

With respect to claim 41, Tuyl teaches that the stage may comprise a handling device used to hold and align well plates in a precise manner (para. 0055), but fail to teach that the stage comprises a depression for aligning a slide or microtiter well plate that fits into the depression.

Bloomfield et al., however, teach stages having a rectangular depression for mounting slides (fig.1), and further teach that the stages are durable, reliable, and easy to service, while providing good optical alignment (column 1, lines 25-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used one of the stages of Bloomfield et al. comprising a rectangular depression


for mounting and alignment of slides in the device of Tuyl, particular since the stages are durable, reliable, and easy to service, while providing good optical alignment.

Conclusion

13. No claims are allowed.
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571) 272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nelson Yang
Patent Examiner
Art Unit 1641